To: Erin Foresman/R9/USEPA/US@EPA[]
Cc: Shouse Michelle [mkshouse@usgs.gov]; rince Keith [krprince@usgs.gov]
From: Robin Stewart
Sent: Tue 10/25/2011 4:11:17 PM
Subject: Re: BDCP - toxins appendix
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nknowles@usgs.gov
http://cascade.wr.usgs.gov/
foresman.erin@epamail.epa.gov
http://www.epa.gov/region9/water/watershed/sfbay-delta/index.html
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Hi Erin,
In re-reading my email I should clarify that we will be testing specific hypotheses about distributions of selenium in North Bay and the Delta with the 3D hydrodynamic model as part of our CASCaDE II project. The link is provided below. We anticipate that this model could also be used to test hypotheses about other constituents such as methylmercury in the future.

The primary contacts for that project are Lisa Lucas (llucas@usgs.gov) and Noah Knowles (nknowles@usgs.gov).
http://cascade.wr.usgs.gov/

Robin

On Oct 25, 2011, at 8:34 AM, foresman.erin@epamail.epa.gov wrote:

Hi Robin,
Thank you so much for your response. I appreciate the information, contacts, and quick reply!! It is also very exciting to know about your 3D water quality model for the Delta. Is there a document that describes the 3D model and its development just for my background education?

I'll look for replies from Mark and Lisa and follow up with them. Thank you for your help!!
Erin

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Erin Foresman
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http://www.epa.gov/region9/water/watershed/sfbay-delta/index.html

From: Robin Stewart <arstewar@usgs.gov>
To: Erin Foresman/R9/USEPA/US@EPA
Cc: Shouse Michelle <mkshouse@usgs.gov>, Prince Keith <krprince@usgs.gov>, Michelle Hornberger I <mhornber@usgs.gov>, Mark Marvin-DiPasquale C <mmarvin@usgs.gov>, Lisamarie Windham-Myers <lwindham-myers@usgs.gov>
Date: 10/25/2011 07:16 AM
Subject: Re: BDCP - toxins appendix

Hi Erin,
It is true that there are no coupled hydrodynamic - methylmercury models developed for the Yolo. However, there have been a few targeted process studies on parts of the Yolo and other regions of the Delta (Twitchell, Suisun Marsh) that might provide some perspective on how flows and residence times impact methylmercury production and transport. I would contact Mark Marvin DiPasquale on these. Another person to talk to is Lisa Windham who conducted a coupled hydrodynamic/methymercury transport study at Crissy Field (yes, far away, but offers information about transport mechanisms in tidal marsh habitat) that showed how there was net transport of methylmercury out of the marsh into the Bay over a tidal cycle.

I've copied Mark and Lisa on this email and I'm sure they will also respond.

We are currently developing a 3D transport model for in the Delta that will hopefully be available in the next year or so to test hypotheses about how flows impact concentrations and fate of dissolved constituents in the Delta. A 3D model is required due to the complex bathymetry of the Delta and how it impacts net flows and residence times. This model would not address methylmercury production rates. For those you need to speak to Mark to get an update from him.

Best regards,
Robin

On Oct 24, 2011, at 2:13 PM, foresman.erin@epamail.epa.gov wrote:

Hi Michelle,
Thank you so much for sending out this email. I've read through the toxins appendix/'evaluation' and I'm very interested in your and/or your colleagues opinions about the level of water quality analysis provided and what

types of analyses are reasonable to conduct. For example, there are a few sections with statements similar to this one,

"Quantification of this effect [increased flows in Yolo Bypass and decreased assimilation capacity from operations] on methylmercury in the aqueous system is not possible given the lack of information on current concentrations and distribution of mercury throughout the Yolo Bypass system, residence times of preliminary proposal–related inundation of Yolo Bypass, the rate of methylmercury production, and transport out of the Yolo Bypass and into the Sacramento River." p. D-17.
I'm interested in understanding if there are models capable of providing a more robust analysis with available inputs/information.

Thanks in advance for any guidance you have and please don't hesitate to get in touch if you have questions.
Thanks!
Erin

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http://www.epa.gov/region9/water/watershed/sfbay-delta/index.html

-----Michelle K Shouse <mkshouse@usgs.gov> wrote: -----
To: Theresa S Presser <tpresser@usgs.gov>, "Robin Stewart" <arstewar@usgs.gov>, Michelle I Hornberger <mhornber@usgs.gov>, snluoma@ucdavis.edu
From: Michelle K Shouse <mkshouse@usgs.gov>
Date: 10/24/2011 12:53PM
Cc: Keith R Prince <krprince@usgs.gov>, Erin Foresman/R9/USEPA/US@EPA
Subject: Fw: BDCP - toxins appendix

Hi Ladies,

I received the e-mail below from Karen Schwinn at EPA. She is concerned the BDCP Effects Analysis document attached is not as detailed as it should be. If possible, could you take a look at the document and perhaps send along some suggestions to Erin Foresman at EPA? If there are others that you think could provide some guidance, please let me know and I will forward the request to them. If you can, please send Erin your suggestions by the end of this week (Oct. 28) as she needs to send them on early next week.

If you have any questions, you can reach Erin at Foresman.Erin@epamail.epa.gov.

Thanks!
Michelle
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~~~~~~

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----- Forwarded by Michelle K Shouse/DO/USGS/DOI on 10/24/2011 12:41 PM -----
From: Schwinn.Karen@epamail.epa.gov
To: Eric Reichard <egreich@usgs.gov>, rfujii@usgs.gov, "Shouse, Michelle K" <mkshouse@usgs.gov>
Cc: Foresman.Erin@epamail.epa.gov
Date: 10/21/2011 03:48 PM
Subject: Fw: BDCP - toxins appendix

Eric, Roger, and Michelle -

We just got this document (attached) from DOI. Its an appendix to the BDCP Effects Analysis prepared by the new consultant, ICF. This one is supposed to evaluate the contaminant effects on T&E species from the proposed BDCP actions (considering only the most extreme conveyance option, plus some range of habitat restoration). The constituents discussed in the document include selenium, mercury, ammonia, copper and pesticides.

From my non-scientific read, it seems pretty darn superficial - it basically says there will be less dilution but likely won't matter to fish. We are writing comments, pointing out some obvious things and questions we need addressed in the NEPA and/or 404 process. What's more difficult is advising them on how they might approach a deeper analysis. Do your folks have any time to look at this? Federico wants comments by noon on November 1 - though after that there may be an opportunity to interact with ICF directly. I checked with David Nawi on USGS involvement and he welcomes it, though I guess hasn't sought it in this particular case, given your resource constraints.

Erin Foresman, on our staff (located in Sacramento) is working on our comments. Feel free to contact have your folks contact her directly if they are able to assist. Thanks! - Karen

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[attachment "App D_Toxins_101411.pdf" removed by Erin Foresman/R9/USEPA/US]

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Check out our project website:
http://wwwrcamnl.wr.usgs.gov/tracel/
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